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REMARKS

In the office action, the examiner rejected Claims 1-3, 5-13 and 15-20 under 35 U.S.C. 103(a) as being unpatentable over Nimura et al. (U.S. Patent No. 6,202,026) in view of Morimoto et al. (U.S. Patent No. 6,351,706) in further view of Endo et al. (U.S. Patent No. 6,169,552). Accordingly, the applicant has amended concurrently herewith Claims 1 and 11 to more clearly differentiate the present invention from the technologies disclosed by the cited Nimura et al. reference, the cited Morimoto et al. reference, and the cited Endo et al. reference.

More specifically, the applicant has added the underlined portion of "wherein when the map image is zoomed-in to a predetermined degree to sufficiently enlarge the map image, the navigation system displays POI (point of interest) icons and a balloon message on the map image where the balloon message is a text message displayed within a balloon shape on the screen that describes detailed information regarding the POI icons within an area specified by the cursor" to Claims 1 and 11. This feature is supported by the original disclosure of the instant case, for example, Figures 13A-13F and the counterpart description in the specification. Especially, Figure 13D shows a balloon message 227 and POI icons 228 on the screen of the navigation system and the description at page 19, lines 3-14 in the specification explains this feature, which reads as follows:

The assignee of this invention provides a navigation system which is able to display POI (Point of Interest) icons when the map image is large enough. Thus, in Figure 13D, POI icons 228 and a balloon message 227 will

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be displayed to prompt the user to examine the information regarding the POI icons. In this example, the balloon message 227 shows "POI ICON LIST" which means that the detailed information regarding the POI icons within the area specified by the cursor circle 225 is available. Typically, each icon indicates a category of POI to differentiate from other categories. Examples of such category include restaurant, bank, gas station, hotel, ATM (Automatic Teller Machine), and the like.

As stated in the previous response to the office action, the present invention aims to improve performance of a navigation system in zooming-in and zooming-out the image on the screen. In order to achieve this objective, the navigation system under the present invention is constructed such that zooming the map image can be performed without accessing the map data from the map data storage each time the zooming is to be performed. Namely, the map data that covers an area larger than the display screen area is retrieved from the map data storage such as DVD, hard disc, etc., and is stored in a separate memory device. The newly added feature regarding the balloon message, POI icons, and the cursor area is related to such zooming operations where the balloon message and POI icons will be displayed when the map image is enlarged (zoomed-in) to a sufficient degree. It should be noted that the balloon messages appear for the POI icons that are located within an area specified by the cursor.

The cited Nimura et al. reference shows a map display device that allows two-part split screen display where one display shows a magnified view of another window specified by a frame that is zoomed up. Although the cited Nimura et al. reference discloses a map image and the idea of scrolling the map image, the applicant

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does not find any description that describes how to perform the map scrolling and, in particular, how to retrieve map data and using additional data to cover the insufficient area. The cited Nimura et al. reference does not show the relationship between the size of the map data retrieved and the viewing area of the navigation screen. In other words, the cited Nimura et al. reference does not disclose the basic mechanism of the present invention to increase the operation speed for zooming-in and zooming-out the image on the navigation screen.

Further, the cited Nimura et al. reference does not disclose the idea of changing the size of the map image based on the distance from the center of the screen of the navigation system. Furthermore, the cited Nimura et al. reference does not show the specific manner of displaying the information on the screen utilizing the balloon message and the POI icons when the map scale reaches a predetermined value. Furthermore, the cited Nimura et al. reference does not show the specific manner of displaying the balloon message regarding the POI icons within an area specified by the cursor on the screen.

The cited Morimoto et al. reference is directed to a navigation apparatus for displaying maps and performing location inputting and present vehicle position tracking. The navigation apparatus of the cited Morimoto et al. reference is designed to enable efficient execution of data communication for land map display to thereby make it possible to smoothly perform map scrolling and rotation. It appears that the cited Morimoto et al.

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reference shows the idea of storing the map data converted to screen coordinates in a memory of faster speed than the original data storage.

The cited Morimoto et al. reference, however, does not show the newly added feature of the present invention which defines the specific manner of displaying the information on the screen utilizing the balloon message and the POI icons when the map scale reaches a predetermined value. Furthermore, the cited Morimoto et al. reference does not show the specific manner of displaying the balloon message regarding the POI icons within an area specified by the cursor on the screen.

The cited Endo et al. reference is directed to a map display device for displaying a three-dimensional map on a screen of a display device. As pointed out by the examiner, the cited Endo et al. reference stated that the character information is preferably displayed with a leader line or leader line having a frame surrounding the character information (like a balloon of a cartoon) in order to show the connection between the character information and the corresponding object (column 35, lines 49-54), an example of such a balloon message is shown in Figure 51B and 52A. Although the balloon message is disclosed by the cited Endo et al. reference, as defined in Claims 1 and 11 of the present invention, such a balloon message must appear when the POI is specified by the area of the cursor on the screen. This feature of the present invention is not shown or suggested by the cited Endo et al. reference, since there is no indication of a cursor on the screen.

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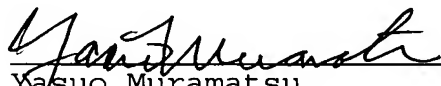
Since the essential features of the present invention are not disclosed by the cited Nimura et al. reference, the cited Morimoto et al. reference, or the cited Endo et al. reference, the present invention is not obvious over the cited references taken singly or in combination. Therefore, the applicant respectfully submits that the rejection under 35 U.S.C. 103(a) is no longer applicable to the present invention.

Under the circumstances, the applicant believes that the present application is in the condition for allowance, and the applicant respectfully requests that the present application be allowed and passed to issue.

Respectfully submitted,

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